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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/652,159	08/31/2000	Te-Kai Liu	YOR9-2000-0385US1	2619

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EXAMINER

FRENEL, VANEL

ART UNIT	PAPER NUMBER
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3627

MAIL DATE	DELIVERY MODE
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06/20/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/652,159

Applicant(s)

LIU ET AL.

Examiner

Vanel Frenel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Notice to Applicant

1. This communication is in response to the Pre-Appeal Brief Request for Review filed on 4/24/07. Claims 1-20 are pending.

2. The Pre-Appeal Brief Request for Review has been persuasive, therefore the previous Office Action has been withdrawn and a new Office Action is hereby presented.

3. In view of the Appeal Brief filed on 4/24/07, PROSECUTION IS HEREBY REOPENED as set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 C.F.R 1.111 (if this Office action is non-final) or a reply under 37 C.F.R 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal is requested, such request must be accompanied by a supplement appeal brief, but no new amendments, affidavits (37 C.F.R 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 C.F.R 1.193) (b) (2).

Claim Rejections - 35 USC § 112

4. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant

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regards as the invention. Applicant's incorporates language "checking by the reservation server an availability of a requested car and, if a car is available, creating by the reservation server a digital key by car and user information with a digital signature of the reservation server" is unclear to the Examiner. Appropriate correction is needed in the next correspondence.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Obradovich et al (2002/0013815) in view of Mattes et al (6,380,842).

(A) As per claim 1, Obradovich discloses a car rental system comprising:

a fleet of cars, (See Obradovich, Page 11, Paragraphs 0015-0117), and

a management system for handling reservation and car return, said management system (See Obradovich, Page 5, Paragraph 0056),

a key generation system for generating digital keys for renters of the car rental system (See Obradovich, Page 10, Paragraphs 0108-0111); a key return system for processing digital keys returned by renters (See Obradovich, Page 11, Paragraph 0114).

Obradovich does not explicitly disclose that the system having each of said fleet of cars being capable of invalidating a digital key; and wherein there exists no data communication link between the fleet of cars and the management system.

However, these features are known in the art, as evidenced by Mattes. In particular, Mattes suggests that the system having each of said fleet of cars being capable of invalidating a digital key (See Mattes, Col.5, lines 25-64); and wherein there exists no data communication link between the fleet of cars and the management system (See Mattes, Col.5, lines 25-51).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have included the features of Mattes within the system of Obradovich with the motivation of blocking state to be deactivated only in the workshop by resetting the key by means of a special code which is related to the respective key or the automobile (See Mattes, Col.2, lines 25-28).

(B) As per claim 2, Mattes discloses the system further comprising a parking lot guarded by a security gate, said fleet of cars being parked within confines of said parking lot when not rented by a renter of the car rental system, said security gate only opening when a valid digital pass is presented by a renter of the car rental system (See Mattes, Col.2, lines 10-28).

The motivation for combining the respective teachings of Mattes and Obradovich are as discussed in the rejection of claim 1 above, and incorporated herein.

(C) As per claim 3, Mattes discloses the system wherein the management system is accessed by a prospective renter over a network and the prospective renter is given a digital key to operate a particular car and a digital pass to open the gate of the parking lot where said particular car is parked, after said prospective renter completes a reservation for said particular car, said digital key and digital pass being effective starting from the time specified by said reservation (See Mattes, Col.8, lines 24-49).

The motivation for combining the respective teachings of Mattes and Obradovich are as discussed in the rejection of claim 1 above, and incorporated herein.

(D) As per claim 4, Mattes discloses the system wherein the prospective renter accesses the management system at a kiosk located in the parking lot where the particular car is parked (See Mattes, Col. 8, lines 24-42).

The motivation for combining the respective teachings of Mattes and Obradovich are as discussed in the rejection of claim 1 above, and incorporated herein.

(E) As per claim 5, Obradovich discloses the system wherein the prospective renter accesses the management system over the Internet (See Obradovich, Page 12, Paragraph 0118).

(F) As per claim 6, Mattes discloses the system wherein the key generation system stores a digital key on a storage device provided by a prospective renter (See Mattes, Col.8, lines 24-36).

(G) As per claim 7, Obradovich discloses the system wherein the storage device is a smart card (See Obradovich, Page 1, Paragraph 0011).

(H) As per claim 8, Obradovich discloses the system wherein the digital key comprises car and user identification (ID) signed by the management system to authenticate the digital key (See Obradovich, Page 8, Paragraphs-0095 0094; Page 10, Paragraphs 0108-0111).

(I) As per claim 9, Obradovich discloses the system wherein a renter of a car invalidates a valid digital key upon returning a car to the car rental system and presents an invalidated digital key to the key return system to complete a car return (See Obradovich, Page 10, Paragraph 0106).

(J) As per claim 10, Obradovich discloses the system wherein the invalidation of a valid digital key includes storing car status information relevant to computing by the key return system a receipt for the renter (See Obradovich, Page 10, Paragraphs 0108-0112).

(K) As per claim 11, Obradovich discloses a computer implemented method for operating a car rental system comprising the steps of

accessing a reservation server by a prospective car renter to reserve a car (See Obradovich, Page 10, Paragraphs 0103-0104);

authenticating the prospective car renter by the reservation server, upon the reservation server successfully authenticating the user, prompting the prospective car renter for the date, time, and location for pickup and return, and the type of car (See Obradovich, Fig.21; Page 11, Paragraph 0112);

checking by the reservation server an availability of a requested car and, if a car is available, creating by the reservation server a digital key by car and user information with a digital signature of the reservation server (See Obradovich, Page 10, Paragraphs 0108-0111); downloading the digital key to a portable storage device being used to gain access to a rental car (See Obradovich, Page 10, Paragraphs 0108-0112).

Obradovich does not explicitly disclose that the system having done or performing without communication between the rental car and the reservation server.

However, this feature is known in the art, as evidenced by Mattes. In particular, Mattes suggests that the method having done or performing without communication between the rental car and the reservation server (See Mattes, Col.5, lines 25-51).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have included the features of Mattes within the system of Obradovich with the motivation of blocking state to be deactivated only in the workshop by resetting the key by means of a special code which is related to the respective key or the automobile (See Mattes, Col.2, lines 25-28).

(L) As per claim 12, Obradovich discloses the method wherein the step of accessing the reservation server is performed via a network (See Obradovich, Page 12, Paragraph 0118).

(M) As per claim 13, Obradovich discloses the method wherein the network is the Internet (See Obradovich, Page 12, Paragraph 0118).

(N) As per claim 14, Obradovich discloses the method wherein the step of authenticating a prospective car renter includes the steps of
prompting the prospective car renter to enter a personal identification number (PIN) (See Obradovich, Page 10, Paragraph 0104); and
comparing the entered PIN with a valid PIN for the prospective car renter (See Obradovich, Page 10, Paragraph 0104; Page 11, Paragraph 0114).

(O) As per claim 15, Obradovich discloses the method wherein the step of creating a digital key comprises the steps of
computing a hash of the car renter's valid PIN (See Obradovich, Page 10, Paragraph 0108-0110);
combining car and renter identification with the hashed PIN (See Obradovich, Page 8, Paragraphs 0089-0095); and
digitally signing the combined information by said reservation server (See Obradovich, Page 10, Paragraphs 0106-0111).

(P) As per claim 16, Obradovich discloses the method further comprising the steps of inserting the portable storage device by a car renter into a slot for receiving the portable storage device in a rented car (See Obradovich, Page 1, Paragraph 0011);

upon detecting the portable storage device inserted into the slot,
obtaining by an access controller installed in the rented car the digital key stored on the portable storage device and checking by the access controller whether the digital key is valid and verifying the signature on the digital key (See Obradovich, Page 9, Paragraph 0097-0098)

if the digital key is valid and the signature is verified, the access controller then prompting the car renter to enter his or her identification and checking for correctness of the car renter's identification (See Obradovich, Page 10, Paragraphs 0103-0104); and if the entered identification for the car renter matches a correct identification on the portable storage device, the access controller activating instruments of the car which the car renter is authorized to have access to (See Obradovich, Page 10, Paragraphs 0103-0106).

(Q) As per claim 17, Obradovich discloses the method further comprising the steps of upon receiving a car renter's request to return a car, prompting the car renter to insert his or her portable storage device into the slot for the portable storage device (See Obradovich, Page 1, Paragraph 0011; Page 2, Paragraph 0039); obtaining by the access controller car status information and car identification (See Obradovich, Page

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10, Paragraph 0104); creating by the access controller a return packet by combining car status information and the current digital key (See Obradovich, Page 0108-0110); signing the return packet by the access controller, appending the car identification to the signed return packet, and saving the signed return packet into the portable storage device (See Obradovich, Page 12, Paragraph 0118); and invalidating by the access controller a current digital key (See Obradovich, Page 10, Paragraphs 0106-0108; Page 11, Paragraphs 0113-0116).

(R) As per claim 18, Obradovich discloses the method further comprising the steps of upon receiving a car renter's request to return a car, retrieving the return packet from the portable storage device (See Obradovich, Page 8, Paragraph 0094);

verifying a signature on the return packet (See Obradovich, Page 9, Paragraph 0095); and

updating the car status and printing a receipt for the car renter (See Obradovich, Page 11, Paragraph 0112).

(S) As per claim 19, Obradovich discloses the method wherein the portable storage device is a smart card (See Obradovich, Page 11, Paragraph 0112).

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(T) As per claim 20, Obradovich discloses the system wherein each of said fleet of cars has a storage device for storing a record of the digital key (See Obradovich, Page 9, Paragraph 0097).

Response to Arguments

7. Applicant's arguments filed on 4/24/07 with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection. Applicant's arguments will be addressed hereinbelow in the order in which they appear in the response filed 4/24/07.

(A) At pages 1-4 of the 4/24/07 response, Applicant argues that the features in the 11/28/06 appeal brief are not taught or suggested by the applied references.

In response, all of the limitations which Applicant disputes as missing in the applied references, including the features in the 4/24/07 appeal brief, have been fully addressed by the Examiner as either being fully disclosed or obvious in view of the collective teachings of Obradovich and Mattes, based on the logic and sound scientific reasoning of one ordinarily skilled in the art at the time of the invention, as detailed in the remarks and explanations given in the preceding sections of the present Office Action and in the prior Office Action, and incorporated herein. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In addition, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited but not the applied prior art teaches system for recognizing authorization to use a vehicle (5,812,067), handheld transmitter for the remote control of various vehicle systems (5,541,571).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vanel Frenel whose telephone number is 571-272-6769. The examiner can normally be reached on Monday-Thursday from 6:30 am-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zeender Ryan Florian can be reached on 571-272-6790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Vanel Frenel

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June 4, 2007